

**Start your system installation with the  
 “System Installation” section of the User Manual**

**All LightSPEED speakers should be in  
 accordance with Uniform Building Code, state  
 and local building department requirements**

### Step 1: Selecting Speaker Location

**One CNXQ™ Flat Panel Ceiling Speaker is designed for rooms smaller than 1200 sq. ft. and with a ceiling height of 9–12 feet.**

Before starting the system installation, speaker placement needs to be determined. This speaker is designed to be mounted in the ceiling in or near the middle of the classroom (See figure 1.). The speaker lays directly into the acoustic ceiling grid, so locate the tile that is approximately in the center of the classroom.

### Step 2: Installing and Connecting the Speaker Wire

- A. Identify a suitable location for the receiver/amplifier where it is easily assessable, close to a power outlet, and at least 6 feet away from any computers.
- B. Remove the ceiling tile from the ceiling that was identified in Step 1.
- C. Set the ceiling tile on a flat work surface with patterned side facing down. The dimensions of the CNXQ Speaker are 2' x 2'. Using a straight edge, cut 24" off the end of a standard 2' x 4' ceiling tile as shown in Figure 2. (If the ceiling tile grid is 2' x 2', simply remove the tile and replace with the CNXQ speaker).
- D. Locate the coil of speaker wire. To connect the wire to the speaker, press down on the colored terminals on the back of the speaker, insert the wire and release the tab to clamp it in place. Insert the black wire into the black-tabbed terminal and the red wire into the red-tabbed terminal.
- E. Place the other end of the wire up through the opening in the ceiling and route over the ceiling tiles and back down the wall to the receiver/amplifier. (NOTE: when routing wire overhead, it is important to always follow local building and electrical codes, securing wire as required). Do not connect the wires to the receiver amplifier yet.
- F. If installing the speaker into a 2' x 4' suspended ceiling, snap the included cross tee into the suspended ceiling grid. Locate the slots in the grid at the center of the 2' x 4' area. Insert one end of the tee, then the other so it locks into place.
- G. The speaker has an earthquake strap connected to the back so it can be tied off to the ceiling structure for safety purposes. Unscrew one end of the wire from the back of the speaker to be tied off to the ceiling supports. If local building codes do not require the use of an earthquake strap and it is not being used, you should completely remove the strap from the speaker so that does not create unwanted vibration.
- H. Lay the CNXQ directly onto the ceiling tile grid as shown in Figure 3. Secure the speaker to the ceiling with the earthquake strap as required by local building codes. Speaker wire should also be secured to the ceiling. **DO NOT** lay the speaker wire across the back of the speaker to avoid unwanted vibration.
- I. Insert the cut tile back into the ceiling.

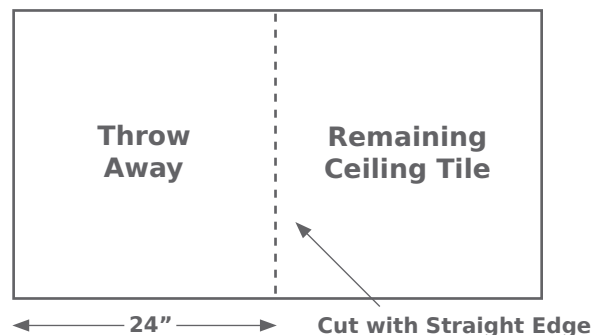
### Room Installation: Top View

**Figure 1:**



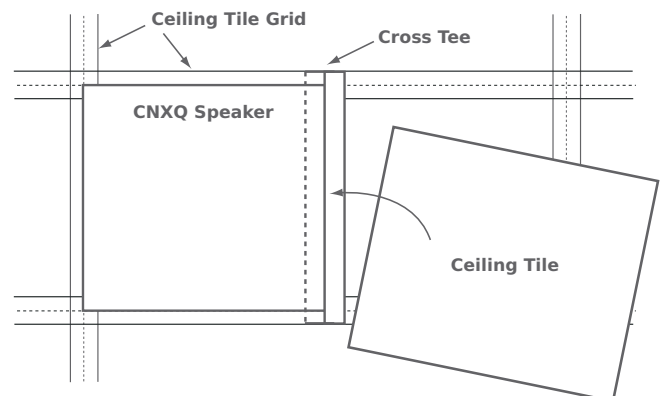
### Cutting a 2' x 4' Ceiling Tile

**Figure 2:**



### Installing the Speaker

**Figure 3:**



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## Step 3: Connect Speakers and Wire to the Receiver/Amplifier

- A. Connect the wire coming from the speaker wire to the receiver/amplifier in the following manner based on the system type:

820/850iR (see figure 4)

- Unscrew the red and black caps on the binding post connectors.
- Insert the bare red wire into the red hole that was revealed by unscrewing the red cap and the black wire into the hole on the black connector.
- Screw the caps back down onto the wires until they are secure.
- Make sure the speaker on/off switch next to the jack (850 only) is switched to the “on” position.

880iR (see figure 5)

- Unplug the euro-block style connector from the SPEAKER 1 jack.
- Insert the black wire (-) into the left side of the connector and lock it down by tightening the screw on top of the connector.
- Insert the red wire (+) into the right side of the connector and lock it down in the same manner.
- Plug the connector back into the SPEAKER 1 jack and lock it into the amplifier by tightening the two side screws.
- The corresponding speaker volume knob should be left in the 12:00 position.
- Make sure the corresponding on/off switch on the front of the unit is in the “on” position.

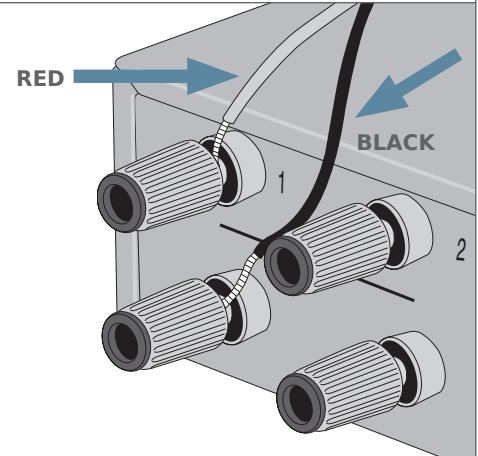
- B. Speaker wire should be secured to the wall and concealed if desired with wire mold.

## Step 4: Equalization

- A. Each receiver/amplifier includes an 8-band equalizer that allows users to fine-tune their classroom based on different room characteristics. Figure 6 shows the factory recommended settings for the CNXQ speaker. Since all rooms are different, this is only meant as a starting point and may require some adjustment.
- B. The ideal sound is a crisp, clear sound with no feedback. Volume levels should be set to a point you can barely hear your own voice. The goal is to try to replicate the sound of your voice as if the child is sitting directly in front of you, not to amplify your voice at high volumes. Because of the classroom size and constant proximity to the speaker, the system can product feedback (squealing) if the volume level is set too high.
- C. Return to the “Initial Set-up” section of the user manual to complete the remaining steps of the system installation.

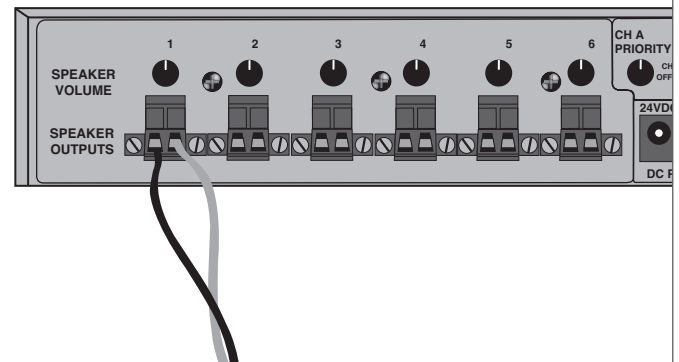
## Connecting Speaker Wire to Back of 820/850iR

Figure 4:



## Connecting Speaker Wire to Back of 880iR

Figure 5:



## Factory Recommended EQ Setting

Figure 6:

